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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Thierry Chartier

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EXAMINER

THROWER, LARRY W

ART UNIT

PAPER NUMBER

1791

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/534,845	Applicant(s) CHARTIER ET AL.	
	Examiner LARRY THROWER	Art Unit 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 November 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-12 and 14-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-12 and 14-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The amendment filed November 6, 2009 has been entered. Claims 1, 3-9 and 12 are amended; claims 2 and 13 are canceled. Claims 1, 3-12 and 14-19 are under examination.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
3. **Claims 1, 3-11 and 14-19** are rejected under 35 U.S.C. 103(a) as being unpatentable over Goodman *et al.* (US 5,972,263), as evidenced by Applicant's Specification (page 3, lines 22-24).
 - Regarding **Claim 1**, Goodman teaches a process for producing clay compositions for use in slip casting. Goodman teaches a slip casting process wherein a slip (col. 1, lines 22-29) to form a deposit (col. 1, lines 40-43), the slip being flocculated (Table 1, cols. 11-12; col. 9, lines 29-40; clay slips are flocculated as evidenced by Applicant's specification at page 3, lines 22-24). The slip mixture includes a solution containing water, clay, and deflocculants (col. 1, lines 22-29; see also col. 1, lines 40-43). Once a first portion of the slip has been cast into a deposit, a solution

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containing a deflocculant (the remaining portion of the slip) is filtered through the deposit (col. 1, lines 40-43).

- It is the examiner's position that the solution is "distinct" from the first portion of the slip after the first portion has been cast to form a deposit. That is, after casting the first portion of the slip, the first portion of the slip is separated into a layered deposit on the mold and a residual amount of water. The solution, on the other hand, which is defined as the remaining unfiltered slip portion, includes a homogenous (non-separated, non-layered) solution of water, clay and deflocculants and is thereby "distinct" from the first portion of the slip, at least at this point in Goodman et al.'s method of producing a ceramic article.
- In the embodiment cited, Goodman et al. is silent as to the slip being cast under pressure. However, Goodman et al. discloses that "[a]pplying a pressure to the slip increases the casting rate in proportion to the applied pressure." (col. 2, lines 11-15). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the method of producing a ceramic article as described in the embodiment cited above in Goodman et al. with the step of applying pressure to the slip in order to increase the casting rate, as taught by Goodman et al. (col. 2, lines 11-15).
- Regarding **Claim 3**, Goodman teaches the slip mixture comprises kaolinitic clay (see column 1 lines 22-29).
- Regarding **Claim 4**, Goodman teaches the slip mixture comprises a variety of clays (see column 1 lines 22-29).

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- Regarding **Claim 5**, Goodman teaches the slip mixture comprises quartz (see column 1 lines 22-29).
- Regarding **Claims 6-7**, Goodman teaches using deflocculant of 0.12 wt % (see Table 1 at column 11-12; see also col. 9, lines 29-40).
- Regarding **Claim 8**, Goodman also teaches that deflocculants control the rheological and casting properties of the slip (col. 1, lines 27-29). It would have been obvious to one of ordinary skill in the art at the time of the invention without undue experimentation to optimize the deflocculant wt% in the slip to obtain the desired rheological and casting properties. "Discovery of optimum value of result effective variable in known process is ordinarily within skill of art." *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).
- Regarding **Claims 9-11 and 14-19**, Goodman teaches the process of slip casting to form ceramic articles such as tableware made of china (col. 1, lines 18-29). "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. **Claim 12** is rejected under 35 U.S.C. 102(b) as being anticipated by Marple *et al.* (CA 2,124,863).
- Regarding **Claim 12**, Marple *et al.* teaches a device for producing a ceramic item comprising a mold (see Fig. 1a 10; see also page 6 line 7-13), a first tank suitable for containing a slip (see Fig. 1a at 18; see also page 6 line 15), and a second tank containing a solution (see Fig. 1a at 20; see also page 6 line 15). In addition, Marple teaches a means for alternatively pressure injecting the slip from the first tank and solution from the second tank (see Fig. 1a; see also page 6 line 17-24; see also page 11 line 17-19).
 - In addition, Claim 12 invokes 35 U.S.C. 112, sixth paragraph with the phrase “means for injecting under pressure”. The claim limitation “means for injecting under pressure” is being treated under 35 U.S.C. 112, sixth paragraph. Applicant discloses the “means for injecting under pressure” is a sprue (see Specification Page 7 line 1-5). Thus, Applicant has properly invoked 35 U.S.C. 112, sixth paragraph.

Response to Arguments

6. Applicant's arguments filed November 6, 2009 have been fully considered but they are not persuasive.
- Applicant argues that Goodman et al. "teach away from pressure casting and state that it is too expensive and limiting of a technology and that it is superior to use traditional casting techniques." This argument has been considered but is not persuasive. Contrary to Applicant's assertion, Goodman et al. does not state that pressure casting is too expensive or limiting, rather Goodman et al. teaches that "although the capital cost of the equipment is high," pressure casting is a popular process which has the advantage of increasing the casting rate in proportion to the applied pressure. For a reference to teach away, the reference must suggest that the claimed combination should be avoided as undesirable or ineffective. See *In re Haruna*, 249 F.3d 1327, 1335 (Fed. Cir. 2001); *In re Gurley*, 27 F.3d 551, 553 (Fed. Cir. 1994). Goodman et al. makes no such suggestion. Goodman et al. merely acknowledges a high initial capital equipment cost, and teaches that the advantage of increasing the casting rate has made this recent technology desirable.
- Applicant further argues that the claimed invention differs from Goodman in that Goodman does not disclose a two-stage process, where the second stage includes "casting the slip, then filtering a solution, and further that the solution and slip are **separate** and distinct from one another **prior to the two-stage method**" (emphasis added). This argument has been considered but is not persuasive because it is not

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commensurate in scope with the instant claims. The instant claims do not require the solution and slip to be either:

- i. separate; or
- ii. distinct from one another *prior to the two-stage method*.

The claims merely require the solution to be distinct from the slip, which can occur at any time during the method. That is, Applicant has not required the solution and slip to be distinct prior to, or at the start of, the method of producing a ceramic article.

Goodman discloses casting a solution into a mold which forms a deposit ("a skin or cast of clay body", col. 1, lines 39-41) on the mold which increases in thickness as the solution is filtered through the deposit. At any given point in time after the capillary action of the mold begins drawing the deflocculent-containing solution, a deposit is formed on the mold. It is this deposit through which the deflocculent-containing solution is filtered, this "solution" being distinct from the slip which has been drawn through the mold in that it is now separated by the deposit and distinct from the solution which contains a higher amount of clay. Once a desired deposit thickness is attained, the filtration is stopped and the remaining slip is drained off (col. 1, lines 41-44). Thus, a flocculated slip is cast into a mold to form a deposit, and once the slip has been cast into a deposit then a deflocculent-containing solution which is distinct from the slip is filtered through the deposit, meeting both elements of independent claim 1. Applicant has failed to distinguish the language of the claims over the teachings of the prior art.

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- With regard to claim 12, in response to applicant's argument that Marple *et al.* discloses various process limitations, including mixing slips prior to slip casting, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. Such is the case here.
- Applicant finally argues that the May 26, 2009 declaration of one of the Applicants, Mr. Chartier, "is sufficient, in the Applicants' opinion, to have overcome the previous rejections." This argument has been considered but is not persuasive. As discussed in the previous Office Action, the declaration is insufficient to overcome the rejection of claims 1-12 and 14-19 based upon Goodman and Marple as set forth in the last Office action because it refers only to the system described in the above referenced application and not to the individual claims of the application. Thus, there is no showing that the arguments presented are commensurate in scope with the claims. See MPEP § 716.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LARRY THROWER whose telephone number is 571-270-5517. The examiner can normally be reached on Monday through Friday from 9:30AM-6PM est.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina A. Johnson can be reached on 571-272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Larry Thrower/
Examiner, Art Unit 1791

/Christina Johnson/
Supervisory Patent Examiner, Art Unit 1791